

## ABSTRACT OF THE DISCLOSURE

Expansion and reduction of images, resolution conversion, and processing for forming only some portions of an image into a higher resolution are made easier, and processing speed is increased, and the size of circuit scale is reduced. An image processing device includes an image data input device to input and store an image, a square-area dividing device to divide the input image into one or more square areas, a recurrent triangular-area dividing device to recurrently divide each of the divided square areas into triangular areas, a triangular-area dividing control device to perform control of recurrent division into triangular areas, a coded data generation device to code the divided triangular areas, and a coded data output device to output the generated coded data. The number of pixels contained in one side of the square area generated by the square-area dividing device is made  $2^N + 1$  (where N is a natural number).